The
Spotting Scope

A quarterly newsletter of the Natural Heritage Program Winter 2006
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MICHIGAN'S SNOWBIRDS

Dark-eyed Junco (*Junco hyemalis*)

Though many people associate bird watching with the warm days of summer, there are hardy birds that breed to the north and can be found in Michigan during the coldest winter months. One of the most common of these throughout the Lower Peninsula is the dark-eyed junco.

Photo by Russ Emmons

The dark-eyed junco (*Junco hyemalis*) is a member of the sparrow family and is distinctive with its white or light pink bill, dark gray head, back, and sides, and its light gray or white belly. There are five different subspecies of the junco; the "slate-colored" subspecies is found in Michigan. Juncos can be found all across North America from Alaska and Newfoundland to Mexico and Florida.

They are commonly seen at feeders throughout the winter and have been nicknamed "snowbirds" for their tendency to appear just as the snow starts to fly. To residents of the Upper Peninsula, though, these are summer birds.

Juncos spend the summer in the UP and the northern LP, building nests and raising young along forest edges and in forest openings. Birds may also be found nesting in shrubby habitats typical of regenerating clear-cut or burned-over areas. Courtship begins in May or June after birds have returned from their wintering grounds. Juncos nest on the ground, and the female usually looks for a small cavity under tree roots, logs, rocks or shrubs to build her nest. The nest is a cup formed of twigs, bark, dried leaves, moss, and grass; the nest is lined with fine grass and hair. A typical clutch is 3 to 5 bluish-white eggs covered in brownish speckles which are incubated for 12 to 13 days. Young birds are able to leave the nest by the time they are 2 weeks old, though they remain at least partially dependent on their parents for up to 3 more weeks. Depending on when the young finally leave the nest, adult juncos may raise as many as 3 broods in a summer.

In contrast, it is common to find juncos away from forested landscapes during the winter and frequenting fields, parklands, and suburbs after they leave their breeding grounds in October and November. Juncos tend to feed on the ground and may spend more time picking seed up from the ground around your feeders than at the feeder itself.

Older, more dominant birds arrive on their wintering grounds earliest, followed by younger birds. Males tend to winter farther to the north than females. Birds tend to migrate to the same location year after year so you may see the same birds in your local flock for several years. These flocks spend the winter in a 10-12 acre area, roosting together at night, and have a complicated social hierarchy. You can see this pecking order at your feeder as dominant birds assert their position over other birds by facing them and fanning their tails to reveal the white outer tail feathers or by rushing at, pecking, and chasing subordinate birds. Dominant birds may face each other, extend their necks, and repeatedly raise and lower their bills, though this display rarely results in a fight.

In the spring, males may start pursuing females at your feeder before migrating north to begin the breeding cycle again.

Karen Cleveland,Wildlife Division

NONGAME WILDLIFE FUND

In This Issue:

Natural Heritage Program information can be found on the web at www.michigan.gov/dnr.

DIGISCOPING
A New Form of Wlildlife Photography

We have all seen the pictures in the pages of popular magazines: majestic or artistic close-up shots of animals in the wild. But did you know that you can take pictures like that yourself without investing thousands of dollars in expensive photographic equipment and film? With the advent of affordable digital cameras, a hobby called "digiscoping" has appeared. At its most basic, digiscoping is just using a digital camera and some sort of magnifying device – a monocular, pair of binoculars, spotting scope, or telescope – to take pictures from a distance.

While you often get what you pay for, with more expensive equipment producing better results, even inexpensive equipment can make for some very good pictures. Serious digiscopers use spotting scopes mounted on tripods with special adapters to align the lens of their camera with the eyepiece of the scope. If you're a casual wildlife watcher, try holding your digital camera to one eyepiece of your binoculars, put it on the highest telephoto setting, and take some pictures. It requires a steady hand but can make for some good results with a little practice.

If you're interested in trying your hand at digiscoping, there are a few things to keep in mind:

The quality of your picture depends on the quality of your digital camera. Generally, the more you spend on your camera, the better the pictures it will produce.

Look for a camera with a resolution of 3 megapixels or higher; the more pixels there are in a picture, the clearer the picture will be as it gets enlarged.

Look for a camera with a 3x optical zoom or higher. Digital cameras have an optical zoom factor and a digital zoom factor. You need to use the optical zoom to reduce the effect of vignetting (pronounced "vin-yetting") in your digiscoped pictures. The dark frame in the picture of the peregrine falcon (right) is vignetting and is caused by the wide focus of the camera capturing part of the spotting scope's eyepiece. Using a camera with a lens that is about the same size as the eyepiece of your scope will also help to reduce vignetting.

The magnification you can achieve when digiscoping is the product of your camera's optical zoom and the magnification of your binoculars or spotting scope. Using a camera with a 3x zoom and binoculars with a magnification factor of 10, you have a total magnification of 30x.

Investing in graphics editing software will let you fine tune your results after downloading them. You can resize pictures and cut off vignetting.

Check out digiscoping adapters. These adapters lock your camera to your scope to reduce vibration and line the camera lens with the scope eyepiece. You can find instructions online for making inexpensive adapters, and vendors of optical equipment sell adapters that fit many different scopes and cameras.

There are many resources online that can give you more information about how to digiscope and show the results people have gotten.

Some good places to start looking are:

www.digibird.com/
www.digiscoping.com
www.digiscoping.co.uk
www.digiscoped.com

Scott Manly of Battle Creek took this picture of a peregrine falcon with a HP Photosmart C850 digital camera held to a Pentax PF 80ED spotting scope with a 20-60x zoom eyepiece. The camera has a maximum zoom of 8x, and the scope was at the 20x setting (total magnification of 160x). Even though there is a lot of vignetting, this picture is very valuable from a conservation standpoint: this is the first documentation of a peregrine falcon in Battle Creek since the species restoration project started, and a leg band can clearly be seen on the bird's left leg! Unlike traditional photography, Scott was able to get enough magnification from his digiscoping setup to allow for a positive identification of this bird as a peregrine and to provide details that would not have been possible otherwise.

Continued on page 3

Continued from page 2

Ken Hoover of Midland took these pictures of a bald eagle and a snowy egret. He used a Canon EOS 10D camera and Swarovski HD-ATS80 spotting scope with adapters between the camera and scope. The combined magnification of his setup is equivalent to having a camera with a 1280mm lens! Ken uses this power to zoom in very, very close for some subjects or reach a very long distance to grab a picture of a rare, unusual, or interesting bird.

BACKYARD HAWKS

Many of us live in cities and love to feed birds. Watching these birds as they pick and choose among our seed and suet offerings has delighted us all. For those of us fortunate enough to live in areas with mature trees to diversify our backyards, the birds at our feeders may even attract a hawk or two.

The common hawks attracted to feeders include Cooper's (pictured) and sharp-shinned hawks. These hawks (accipiters) prey on birds in contrast to the hawks we see perched over grassy areas along roadsides (buteos) that wait for a mouse to appear. While roadside hawks with broad wings and shorter tails typically soar over the trees, backyard hawks with short wings and longer tails alternatively flap and sail through the shadows between the trees as they drift up on unsuspecting sparrows and doves. Backyards with bird feeders make great hunting grounds if you are a backyard hawk.

Both Cooper's and Sharp-shinned hawks nest in the forests of Michigan. While Cooper's like deciduous forests, sharp-shins prefer mixed forests including conifers. These birds are alike in that they generally like their privacy while nesting. Both build a stick nest high in a tree but well below the tree top that is reachable by a parent bird flying in from the side.

These hawks seem to abandon their shy nature when they leave their nesting grounds. They and their young arrive in our neighborhoods in late summer to search out attractive bird feeders. Occasionally sounding a kek-kek-kek warning if the neighborhood dog strays close, they otherwise seem to work around the people who chance across their path, often unaware.

Sharp-shins continue south for the winter while Cooper's hawks are happy to remain as backyard visitors throughout the winter. With the hint of spring, both hawks show up again in backyards to actively feed before continuing north to summer sites and the rigors of nesting.

Lately, reports have been surfacing of hawks actually nesting in cities in and around our backyards. Offer them a little wooded greenspace, and occasionally sharp-shins and, rarely, Cooper's hawks will approve of our habitat offerings. Look for them wherever fine bird feeders are found.

2006 NATURAL HERITAGE GRANTS AWARDED

Sixteen projects were selected to receive funding from the Natural Heritage Unit. Project funding comes from State Wildlife Grants received from the U.S. Department of the Interior and are matched with Nongame Fish and Wildlife Funds. A total of 58 projects were submitted requesting funding. Eligible grants had to meet certain criteria including supporting the conservation and restoration of Michigan's rare and declining wildlife species.

Grants awarded in 2006 range from osprey restoration activities to supporting release of Galerucella beetles to control invasive purple loosestrife. Here are descriptions of a few more projects being supported by the grants:

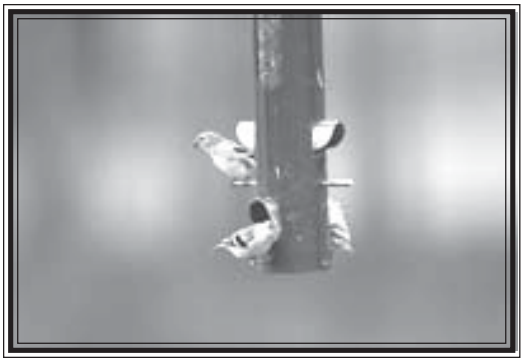
Evaluating Migratory Birds Use of the Beaver Islands
Stopover ecology of migratory songbirds is poorly understood. Because of their location in the open waters of Lake Michigan, the Beaver Islands may be providing habitats that are critical to migrating birds, yet presently, little is known. Data on the importance of the Beaver Archipelago as a stopover site will be gathered. Information on migratory species using the island, including rare or declining species, will be collected. Species use and habitat selection will help develop conservation and management plans for the islands to insure they provide migratory habitat for songbirds migrating through Michigan.

Upper Peninsula Bat Surveys
Abandoned mines are important for over-wintering sites for bats in the Upper Peninsula of Michigan. Abandoned mines are being closed for safety reasons and in the past they were not surveyed for bat populations prior to closing. Closure of these mines without surveys either destroyed bats using the site or made the site inaccessible for continued use by bats. Mines will be surveyed in the Upper Peninsula of Michigan to determine which bat species are present, numbers of bats using the site, and how best to manage these sites.

Blanchard's Cricket Frog Survey
There has been a significant decline in the number of Blanchard's cricket frog (*Acris crepitans blanchardi*) populations in Michigan and the Midwest in the last decade. It is important to identify the remaining cricket frog populations in Michigan and determine the health of these populations. This information is essential for developing long-term management plans for conservation of the species. The survey will include all previously reported cricket frog population sites. The population size, sex ratio, and population connectedness for five of these remaining populations will be identified to determine frog health, collect genetic samples, and identify habitat use. The information collected will support a better understanding of the natural history of unique frogs.

These projects would not be possible without support from Michigan's citizens through contributions to the Nongame Wildlife Fund or through purchase of a Critical Habitat License Plate. When your vehicle license plate is up for renewal, please consider purchasing your loon license plate.

SALMONELLOSIS IN WILDLIFE ADVISORY



Since the second week in January 2006, there have been reports of songbird (Pine Siskins, sparrows, American Goldfinches, and finches) die-offs throughout the State. Sick and dead birds have been observed and the clinical signs are consistent with Salmonellosis. Salmonellosis is a bacterial disease transmitted from bird to bird in their fecal material. Species of birds that feed together in large numbers, such as those listed above, feed and defecate in the same location allowing for easy contamination of food material and resulting in infection with this bacterium.

Sick birds often sit with their feathers fluffed, act lethargic, are unwilling to move, can be easily approached, and in some cases handled. Lesions seen in infected birds are usually confined to the esophagus and crop areas. In all of these areas, necrotic material (dead cells, bacteria, inflammatory materials) accumulates on the lining resulting in a thickening of the tissue. In severe cases, a complete blockage of the esophagus, or crop, can occur resulting in malnutrition and dehydration.

Once dead birds are collected from a site, birdfeeders should be removed and disinfected in a 10% bleach solution and all feeding should stop for at least 2 weeks. Any neighbors that also feed the birds should be contacted and they should do a similar disinfection and stoppage of feeding. If there are piles of spilled feed, these areas should be cleaned up because any contaminated feed that is present could serve as a source of the bacterium for any healthy birds in the area.

For more information on Salmonellosis, go to the DNR Website at www.michigan.gov/dnr and type Salmonellosis in the Search window.

RAISING AWARENESS

Invasive Species: Our Silent Invader

Part two of a three part series: **Forest Invasives**

In part one of our series on invasive species, we discussed the importance of understanding the impact that invasive species have on our environment and what we can do to help stop the spread of these species. They cost our economy billions of dollars a year and are detrimental to our natural environment. We also discussed the history, habits, and how to identify a few grassland invasives and how to control them. In part two, we will go over a few different species that are invading our forested communities: garlic mustard, honeysuckle, and dame's rocket.

GARLIC MUSTARD

Garlic mustard *(Alliaria petiolata)* is a cool-season biennial that was brought to the U.S. by settlers who used it for cooking and medicinal purposes. It is a rapidly spreading herb that spreads quickly into both high quality forests and disturbed habitats. It begins growing early in the spring and can shade or crowd out native wildflowers and tree seedlings that wildlife depend on. After introduction, garlic mustard can spread very quickly and totally dominate a forest floor within five to seven years. It is most often found in shaded areas, but can also be found growing in full sun. It can be found along trails, at the base of large trees, roadsides, and yards; but it cannot tolerate acidic soils. Its first year of growth is in the form of a rosette. It will have one to several, scalloped-edged, dark green leaves. It begins growth in April and is green throughout the year, which makes it easy to identify in the fall and winter. It can also be identified by its garlic smell when leaves or stems are crushed. In April or May of the second year, a stalk will emerge from the rosette. The stalk is generally 1-4 feet in height with several small, white flowers in clusters at the end of the stalks. Seeds will drop in July, after which, the plant dies. Hand pulling can be used to control small infestations, but a burning regimen or chemical application may be needed for larger infestations.

HONEYSUCKLES

There are several different types of honeysuckles found in Michigan, but they are all similar in growth, habits, and methods used to control them. Honeysuckles (*Lonicera spp.)* are upright deciduous shrubs (6-18 feet tall depending on species) that were introduced from Europe and Asia to improve wildlife habitat and control erosion. These shrubs grow vigorously and leaf out early in the spring, which inhibits the growth of native plants and reduces food and cover for wildlife.

They grow in pastures, roadsides and woodland edges. It is relatively shade intolerant and open woodlands are particularly susceptible, especially if the area is disturbed. Honeysuckles are easy to identify early and late in the growing season. They will leaf out one or two weeks before native trees and shrubs and will hold their leaves later in the fall. Twigs are often hollow and tubular flowers will bloom in May and June. Paired fruits come in a variety of colors and will ripen early in summer. To control honeysuckle, hand pulling or digging may be effective on small shrubs but cutting along with the application of a selective herbicide is the preferred method.

DAME'S ROCKET

Dame's rocket *(Hesperis matronalis)* is a short-lived perennial that is native to Europe and Asia. It is found in wildflower seed mixes and can easily escape cultivation. It is often confused with native woodland phlox because they bloom at roughly the same time. The native phlox has five petals, while dame's rocket has only four. It can be found in moist and mesic woodlands, along woodland edges, roadsides, fields, and in open areas. The flowers are white, pink, or purple and will form large, loose clusters. They will bloom from mid-May to June. The easiest way to stop the spread of this species is to avoid planting mixes that contain dame's rocket. If already established, small infestations can be pulled by hand. If in a garden, the flower head should be cut and properly disposed of before seed heads emerge. Chemical application can be used in areas where large infestations occur.

Learning to identify and control these species will help to reduce their spread and the impacts they have on our native forest communities. These species have the potential to really degrade our forests and negatively affect the wildlife that depend on those forest. In the third and final part of this series, we will discuss some of the common plants that have invaded our wetland ecosystems.

TIDBITS

"An incredible number for Michigan!" That was retired wildlife biologist Glenn Belyea's response when, on December 30, 2005, Glenn was out birding with two friends down by Lake Erie. The three were scoping from a point south of the Monroe Power Plant when they counted 54 Bald Eagles sitting on "icebergs" just off from the plant!

Five Books on Wildlife in the Great Lakes Region

The Michigan e-Store provides the opportunity to purchase nongame patches, posters, prints, and wildlife books. Proceeds go directly to the Nongame Fish and Wildlife Fund, the primary funding source for the management, protection, and research of Michigan's endangered, threatened, and nongame species and their habitat.

Five more books recently became available for purchase from the e-Store: *Amphibians and Reptiles of the Great Lakes Region*, *Insects of the Great Lakes Region*, *Mammals of the Great Lakes Region*, *Butterflies of the Great Lakes Region*, and *Fishes of the Great Lakes*.

To visit the Michigan e-Store go to:

www.michigan.gov/dnr then click on michigan e•store

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